

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) ~~Positive~~ A positive working thermal imaging assembly comprising

A - a substrate; and

B - a thermally sensitive imaging element of a composite layer structure comprising

a first layer on the substrate of a polymeric material soluble in an aqueous alkali solution, optionally containing ~~compounds~~ a compound that ~~absorb~~ absorbs and ~~convert~~ converts light to heat and/or a ~~coloured~~ colored dye or pigment;

said first layer being converted ~~at its~~ on a surface thereof by treatment with ~~solutions~~ a solution at an elevated ~~temperatures~~ temperature that ~~contain~~ contains an active compound or compounds capable of rendering said first polymeric material ~~insoluble to~~ less soluble in an aqueous alkali developer at the point of contact; the first layer being oleophilic, wherein the first layer is treated by contact with said solution for 1 to 120 seconds at a temperature of from 50 to 120°C, and wherein said active compound or compounds are polymeric amines, polyacetals, polyethylene glycol, butylated urea formaldehyde, copolymers of vinyl pyrrolidone and vinyl acetate, methylated melamine formaldehyde, cellulose esters, or mixtures thereof;

optionally, a first intermediate layer between the substrate and the ~~[[said]]~~ first layer ~~[[with]]~~ of a ~~second~~ polymeric material which is soluble or dispersible in an aqueous solution and that optionally ~~containing~~ contains ~~compounds~~ a compound that

~~absorb~~ absorbs and ~~convert~~ converts light or radiation to heat and/or a ~~coloured~~ colored dye or pigment coated from a solvent that does not substantially dissolve the first layer; and

optionally, a third or top layer over the converted first layer and composed of a ~~second~~ polymeric material which is soluble or dispersible in an aqueous solution and that optionally containing compounds contains a compound that ~~absorb~~ absorbs and ~~convert~~ converts light or radiation to heat and/or a ~~visible-coloured~~ colored dye or pigment; the first intermediate layer and the third layer being applied with a solvent that does not substantially dissolve the converted first layer.

2. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the first intermediate layer and the third layer are present and are mutually exclusive regarding IR-absorbing/converting with respect to compounds a compound that absorbs and converts light or radiation to heat and visible-coloured a colored dye or pigment.

3. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein ~~[[if]]~~ one of either the first intermediate layer or the third layer contain is present and contains both IR-absorbing/converting compounds a compound that absorbs and converts light or radiation to heat and visible-dyes a colored dye or pigment and the other layer is absent from the assembly.

4. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the first layer contains both the ~~IR-absorbing/converting compounds~~ a compound that absorbs and converts light or

radiation to heat and ~~visible dyes are present in the first layer~~ a colored dye or pigment and they are absent from the intermediate and third layers.

5. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the first layer is treated by contact with a solution of a polymeric amine ~~compound that renders the surface of said second layer insoluble to aqueous alkaline developer where the contact process is for 1 to 120 seconds at a temperature of 50 to 120°C.~~

6. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 5, wherein the contact process is ~~[[for]]~~ from 10 to 90 seconds at a temperature of from 60 to ~~[[100oC]]~~ 100°C.

7. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 6, wherein the contact process is ~~[[for]]~~ from 20 to 60 seconds at a temperature of from 70 to ~~[[90oC]]~~ 90°C.

8. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 5, wherein the contact process is carried out by using a solution containing a non-solvent for the first layer.

9. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 8, wherein the contact process is ~~made by~~ carried out using toluene or water.

10. (Cancelled).

11. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 10, wherein the active compound is in a solution containing from 0.001 and 0.25 weight % thereof.

12. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 11, wherein the active compound is in a solution containing from 0.005 and 0.10 weight % thereof.

13. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 11, wherein the active compound is in a solution containing from 0.01 and 0.075 weight % thereof.

14. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the polymeric material of the first layer is a phenolic resin, a polyvinylphenol or a mixture thereof.

15. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 14, wherein the polymeric material of the first layer ~~includes~~ is a novolac resin.

16. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 14, wherein the polymeric material of the first layer ~~includes~~ is a ~~Novolac~~ novolac resin and the active compound used to treat the same is ~~Solsperse~~ a polymeric amine.

17. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the first intermediate layer and the third layer are present and the ~~second~~ polymeric material of the first intermediate layer and the third layer is selected from the group consisting of a polyvinylalcohol, a polyvinylpyrrolidone, a polyvinylmethyl ether and a polyvinylethyl ether.

18. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, wherein the ~~IR-absorber and converter~~ compound that

absorbs and converts light or radiation to heat is ~~selected from a pigment or dyestuff dye~~ that absorbs radiation between the wavelengths of 700 and 1200nm.

19. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 18, wherein the ~~IR-absorber/converter compound~~ is a pigment ~~selected from Milori Blue~~ and is milori blue or ~~Carbon-Black~~ carbon black.

20. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 18, wherein the ~~IR-absorber/converter~~ ~~wherein the IR-absorber/converter compound~~ is a dye.

21. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, ~~basically comprising just the first layer onto~~ on the substrate~~[[;]]~~, the first layer being treated ~~at the~~ on its upper surface.

22. (Currently amended) ~~Positive~~ The positive working thermal imaging assembly according to claim 1, comprising the substrate, the first layer, the first intermediate layer and the third layer.

23. (Currently amended) ~~Process~~ A process for preparing a positive working thermal imaging assembly comprising

A - a substrate; and

B - a thermally sensitive imaging element of a composite layer structure; the process comprising

(i) applying on ~~[[the]]~~ a substrate a first layer of a first polymeric material soluble in aqueous alkali solution, optionally containing ~~compounds~~ a compound that ~~absorb~~ absorbs and convert converts light to heat and/or a ~~coloured~~ colored dye or pigment; the first layer being oleophilic;

(ii) treating the said first layer ~~at its~~ on a surface thereof with ~~a solution~~ solutions at ~~an elevated temperatures~~ temperature that ~~contain~~ contains an active compound or compounds capable of rendering said first polymeric material ~~insoluble to~~ less soluble in an aqueous alkali developer at the point of contact, wherein the first layer is treated by contact with solution for 1 to 120 seconds at a temperature of from 50 to 120°C, and wherein said active compound or compounds are polymeric amines, polyacetals, polyethylene glycol, butylated urea formaldehyde, copolymers of vinyl pyrrolidone and vinyl acetate, methylated melamine formaldehyde, cellulose esters, or mixtures thereof;

optionally, and before step (i) applying a first intermediate layer between the substrate and the ~~[[said]]~~ first layer ~~[[with]]~~ of a ~~second~~ polymeric material which is soluble or dispersible in an aqueous solution and that optionally ~~containing compounds~~ contains a compound that absorb absorbs and ~~convert~~ converts light or radiation to heat and/or a ~~coloured~~ colored dye or pigment coated from a solvent that does not substantially dissolve the first layer; and

optionally, applying a third or top layer over the treated first layer from step (ii); the third or top layer being composed of a ~~second~~ polymeric material which is soluble or dispersible in an aqueous solution and that optionally ~~containing compounds~~ contains a compound that absorb absorbs and ~~convert~~ converts light or radiation to heat and/or a ~~coloured~~ colored dye or pigment;

the first intermediate layer and the third layer being applied with a solvent that does not substantially dissolve the treated or converted first layer.

24. (Currently amended) ~~Process~~ The process according to claim 23, wherein the step (ii) is performed by immersing the substrate containing the first layer in

a solution at an elevated ~~temperatures~~ temperature that ~~contain~~ contains an active compound or compounds capable of rendering said first polymeric material ~~insoluble to~~ less soluble in an aqueous alkali developer at the point of contact.

25. (Cancelled)

26. (Currently amended) ~~Process~~ The process according to claim ~~[[25]]~~ 24, wherein the step (ii) is performed by ~~immersing the substrate containing the first layer with a solution of a compound that renders the surface of said second layer insoluble to aqueous alkaline developer; wherein the contact process is for 10 to 90 seconds at a temperature of~~ from 60 to 100°C.

27. (Currently amended) ~~Process~~ The process according to claim 26, wherein the step (ii) is performed by ~~immersing the substrate containing the first layer with a solution of a compound that renders the surface of said second layer insoluble to aqueous alkaline developer; wherein the contact process is for 20 to 60 seconds at a~~ temperature of from 70 to 90°C.

28. (Currently amended) ~~Process~~ The process according to claim 23, wherein the step (ii) is performed by immersing the substrate containing the first layer ~~[[with]]~~ in a solution containing a non-solvent for the first layer.

29. (Currently amended) ~~Process~~ The process according to claim 28, wherein the step (ii) is performed by immersing the substrate containing the first layer ~~[[with]]~~ in a solution containing toluene or water.

30. (Cancelled)

31. (Currently amended) ~~Process~~ The process according to claim 23, wherein the active compound is in a solution containing from 0.001 and 0.25 weight % thereof.

32. (Currently amended) ~~Process~~ The process according to claim 31, wherein the active compound is in a solution containing from 0.005 and 0.10 weight % thereof.

33. (Currently amended) ~~Process~~ The process according to claim 30, wherein the active compound ~~the active compound~~ is in a solution containing from 0.01 and 0.075 weight % thereof.

34. (Currently amended) ~~Process~~ The process according to claim 23, wherein the polymeric material of the first layer is a phenolic resin, a polyvinylphenol or a mixture thereof.

35. (Currently amended) ~~Process~~ The process according to claim 23, wherein the polymeric material of the first layer ~~includes~~ is a novolac resin.

36. (Currently amended) ~~Process~~ The process according to claim 23 wherein the first intermediate layer and third layer are applied and the second polymeric material of the first intermediate layer and the third layer is selected from the group consisting of a polyvinylalcohol, a polyvinylpyrrolidone, polyvinylmethyl ether and a polyvinylethyl ether.

37. (Currently amended) ~~Process~~ The process according to claim 23 wherein, wherein the ~~IR-absorber and converter~~ compound that absorbs and converts light or radiation to heat is ~~selected from~~ a pigment or ~~dye~~ dye that absorbs radiation between the wavelengths of 700 and 1200nm.

38. (Currently amended) ~~Process~~ The process according to claim 37, wherein the ~~IR-absorber/converter~~ compound is a pigment ~~selected from Milori Blue and is milori blue or Carbon Black~~ carbon black.

39. (Currently amended) ~~Process~~ The process according to claim 37, wherein the ~~IR-absorber/converter~~ wherein the IR-absorber/converter compound is a dye.

40. (Currently amended) ~~Process~~ The process according to claim ~~[[27]]~~ 23, wherein ~~the assembly basically comprises the first layer onto the substrate; only~~ steps (i) and (ii) are performed and the first layer ~~[[being]]~~ is treated ~~[[at]]~~ on its the upper surface thereof.

41. (Currently amended) ~~Process~~ The process according to claim ~~[[27]]~~ 23, wherein the assembly ~~basically~~ comprises the first layer ~~first layer onto~~ on the substrate; the first layer being treated ~~at the~~ on its upper surface thereof; the intermediate layer and the third layer.

42. (Currently amended) ~~Process~~ The process according to claim ~~[[27]]~~ 23, wherein the step (ii) is performed by applying a coating on the substrate ~~[[by]]~~ using coating rolls; the coating being formed from a coating solution containing an active compound or compounds capable of rendering said first polymeric material of the first layer ~~insoluble to~~ less soluble in an aqueous alkali developer at the point of contact.

43. (Currently amended) A lithographic printing plate, wherein said plate comprises a substrate and a structure B on the same as disclosed in any of the claims 1-22 ~~or a substrate and a structure B as prepared according to any of process claims 1-~~
42.

44. (Currently amended) Color proofing films or plates and Photoresist comprising a substrate and a structure B on the same as disclosed in any of the claims 1-22 ~~or a substrate and a structure B as prepared according to any of process claims 1-42.~~

45. (Currently amended) ~~Assembly or process~~ The assembly according to claim 1 ~~[[or 23]]~~, wherein the ~~binding~~ polymer of the polymeric material of the first layer is a ~~first polymer which is~~ a condensation product of phenol, o-chlorophenol, o-, m- or p-cresol, p-hydroxy benzoic acid, 2-naphthol or other aromatic monohydroxy monomer with an ~~aldehyde such as~~ formaldehyde, acetaldehyde, fural, benzaldehyde, or any other aliphatic or aromatic aldehyde.

46. (Currently amended) ~~Assembly or process~~ The assembly according to claim 45, wherein the ~~binding~~ polymer has a molecular weight in the range from 2,000 to 80,000, ~~more preferably in the range of 4,000 to 40,000 and most preferably in the range of 7,000 to 20,000, and is preferably a Novolac resin.~~

47. (Currently amended) ~~Assembly or process~~ The assembly according to claim 46, wherein ~~[[the]]~~ other polymers are added to the ~~binding~~ polymer ~~for improving the~~ to improve its plate performance; ~~[[the]]~~ said other polymers being selected from a butylated melamine formaldehyde resin; a butylated urea formaldehyde resin; or a copolymer of vinyl pyrrolidone/vinyl acetate.

48. (Currently amended) ~~Assembly or process~~ The assembly according to claim 47, wherein the ~~infrared absorbing compounds are dyes~~ compound that absorbs and converts light to heat is a dye able to absorb radiation from 700 to 1200 nm.

49. (Currently amended) ~~Assembly or process~~ The assembly according to claim ~~[[46]]~~ 47, wherein the layers may contain ~~an infrared-absorbing~~ a dye at 830 nm and another ~~infrared-absorbing~~ dye at 1064 nm, ~~allowing the composition to work on distinct infrared-emitting devices.~~

50. (Currently amended) ~~Assembly or process~~ The assembly according to claim ~~[[46]]~~ 48, wherein the ~~infrared absorbers are preferably comprised of dyes from classes including~~ dye is a pyridyl, quinoliny, benzoxazolyl, thiazolyl, benzothiazolyl, oxazolyl and selenazolyl dye.

51-54. (Cancelled).